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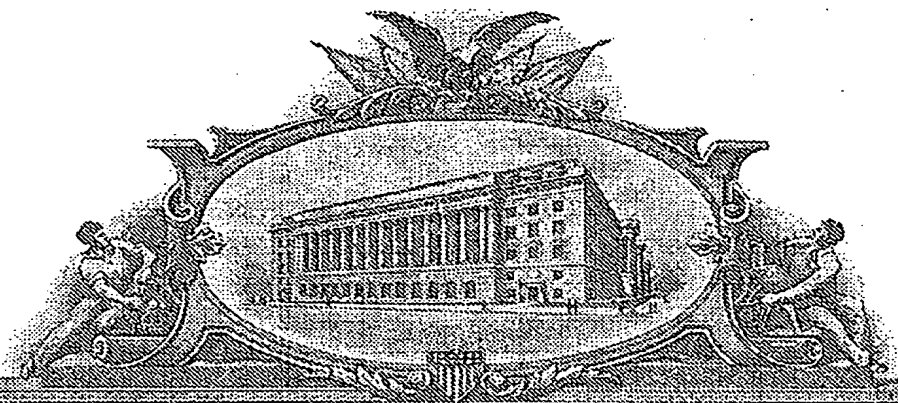
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World Intellectual Property Organization (WIPO) - Geneva, Switzerland
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February 07, 2005

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APPLICATION NUMBER: 60/537,816

FILING DATE: January 20, 2004

RELATED PCT APPLICATION NUMBER: PCT/US05/01718



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16179 U.S. PTO

012004

PTO/SB/16 (08-03)

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

Express Mail Label no. EL995078798US

13441 U.S. PTO
60/537816



012004

INVENTOR(S)					
Given Name (first and middle [if any])		Family Name or Surname		Residence (City and either State or Foreign Country)	
David Alan		Casper		Nevada City, California	
Edward Marion		Casaccia		Carmichael, California	
<input type="checkbox"/> Additional inventors are being named on the _____ separately numbered sheets attached hereto					
TITLE OF THE INVENTION (500 characters max)					
SYSTEM-WIDE DEVICE STATE STORAGE, RECALL, AND ACTUATION (N-MEM)					
Direct all correspondence to: CORRESPONDENCE ADDRESS					
<input type="checkbox"/> Customer Number _____					
OR					
<input checked="" type="checkbox"/> Firm or Individual Name		JOSEPH S. TRIPOLI, THOMSON LICENSING INC.			
Address		PATENT OPERATIONS			
Address		P. O. BOX 5312			
City		PRINCETON	State	NJ	ZIP 08543-5312
Country		USA	Telephone	609 - 734-6834	Fax 609 - 734-6888
ENCLOSED APPLICATION PARTS (check all that apply)					
<input checked="" type="checkbox"/> Specification Number of Pages		2	<input type="checkbox"/> CD(s), Number _____		
<input checked="" type="checkbox"/> Drawing(s) Number of Sheets		2	<input type="checkbox"/> Other (specify) _____		
<input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76					
METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT					
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27.					
<input type="checkbox"/> A check or money order is enclosed to cover the filing fees					
<input checked="" type="checkbox"/> The Director is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: <u>07-0832</u>					
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.					
FILING FEE AMOUNT (\$) <div>160</div>					
The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.					
<input type="checkbox"/> No.					
<input type="checkbox"/> Yes, the name of the U.S. Government agency and the Government contract number are: _____					

Respectfully submitted,
SIGNATURE

[Signature]
TYPED or PRINTED NAME Robert B. Levy

TELEPHONE 609-734-6820

[Page 1 of 2]

Date 1/20/04

REGISTRATION NO. 28,234
(if appropriate)

Docket Number: PU040013

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

This collection of information is required by 37 CFR 1.51. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 8 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Provisional Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 160

Complete If Known

Application Number
Filing Date
First Named Inventor David Alan Casper
Examiner Name
Art Unit
Attorney Docket No. PU040013

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

Deposit Account Number 07-0832

Deposit Account Name THOMSON LICENSING INC.

The Director is authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☒ Credit any overpayments
☐ Charge any additional fee(s) during the pendency of this application
☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

FEE CALCULATION

1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	160

SUBTOTAL (1) (\$) 160

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	0	0	0
Multiple Dependent	0	0	0

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$) 0

**or number previously paid, if greater. For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	950	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,330	2453	665	Petition to revive - unintentional	
1501	1,330	2501	665	Utility issue fee (or reissue)	
1502	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 0

SUBMITTED BY

Name (Print/Type) Robert B. Levy Registration No. (Attorney/Agent) 28,234 Telephone 609-734-6820
Signature Date January 20, 2004

Complete (if applicable)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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PJ 040013

A. Brief summary of the invention

A means for storing as computer data information defining the state of a multiplicity of television production devices allowing modification of, or the addition specificity, to such states via either manual input or direct data exchange with other computer data files, and enabling simultaneous changes in the states of a multiplicity of television production devices by recalling the previously stored data. The term N-MEM has been coined to describe this invention, "N" referring either to "News" as applicable to the Tsunami news production automation project or the number N indicating that an N-MEM stores states of any number of devices unlike an E-MEM which is device specific.

B. Keywords: list keywords or combinations of keywords to guide patent and literature searches. Underline the most important keywords.

Switcher, Mixer, Automation, E-MEM, GPI, PVTv, VDCP, protocol, CORBA,

C. Brief discussion of the problem solved by the invention.

The N-MEM concept was created as a means to dramatically reduce the human resources required to produce a live television broadcast. It allows the production of the broadcast to be distilled into a set of N-MEMs, each N-MEM representing the state of all production devices at a given time in the production. Rather than relying on a group of human operators to specify the state of each device at all times, the N-MEMs are recalled in appropriate sequence automatically causing all devices to perform required functions at the point in time dictated by the progression of the live broadcast.

D. Discussion of how you or others have implemented similar things in the past, including the manner in which others have attempted to solve the problem. Point out disadvantages and weaknesses in previous practice. Include literature references where available.

The Grass Valley Group developed and patented the E-MEM some years ago. Intellectual property protection for this invention has since expired. N-MEM differs from E-MEM in that it is universal rather than device specific. This is more than a change in scale. Rather, it opens up an entire new level of control for live production.

ParkerVision's PVTV system does not use such technology. It treats each command (it is event-oriented rather than state-oriented) as a separate and discrete object to be managed on a timeline. This approach requires an enormous number of stored commands (7,500 for a small station in Bakersfield, CA) and an extremely complex event list that is time consuming to create, unamenable to automatic update from an external systems such as a Newsroom Computer, and cumbersome and error prone when updated or edited manually.

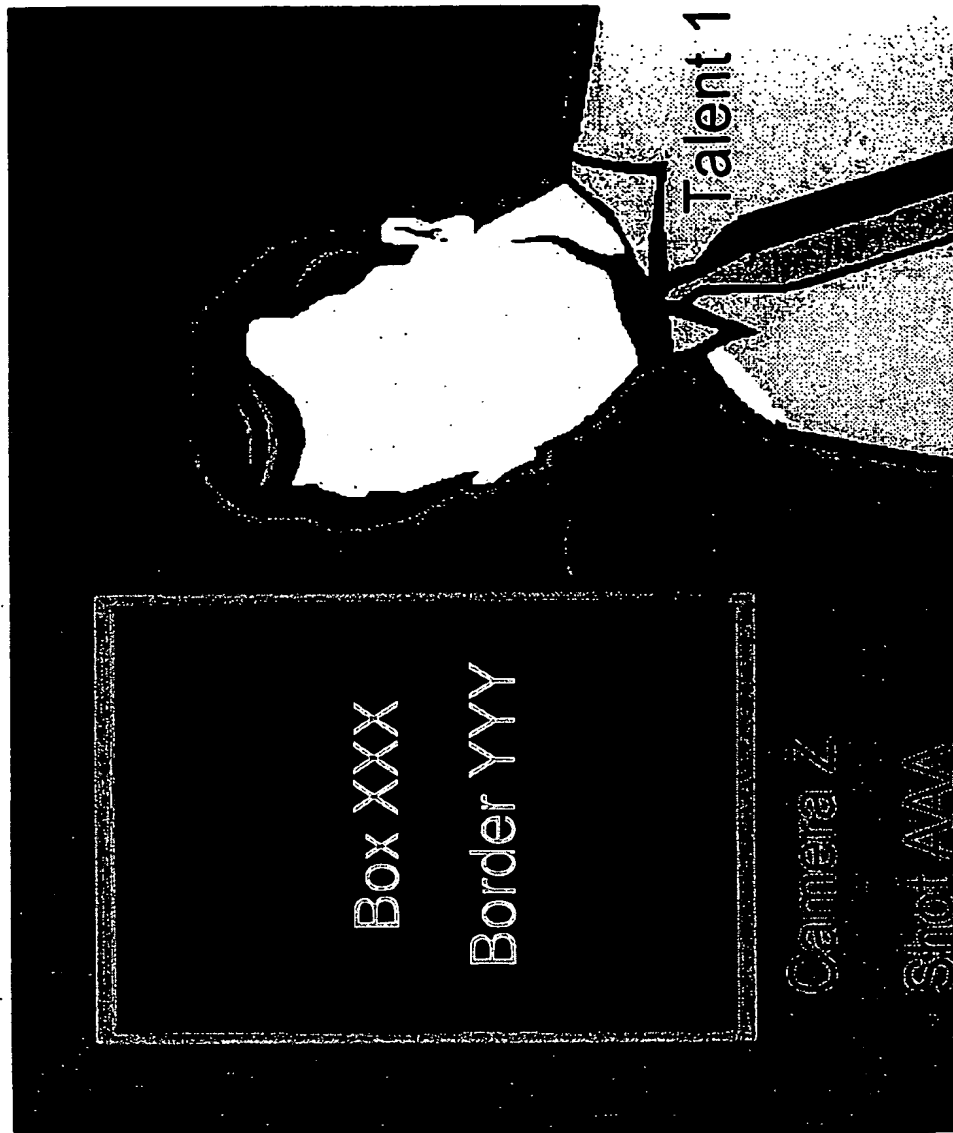
The N-MEM approach would reduce the number of stored commands/configurations (configurations being then more appropriate term since the N-MEM is state oriented) by as much as two orders of magnitude since it agrees with the method in which producers/directors specify the production elements to be used at any point in a live production. Those specifications are defined and communicated in terms of state (what will be seen on the screen) rather than commands (what each device must do to create that on-screen configuration.)

- E. Description of the invention, including one or more practical embodiments of the invention in sufficient detail to allow one with ordinary skill in the art to practice the invention. Include schematic(s), flow chart(s) and or figures to clarify operation of the invention. Point out important features and items you believe to be new. State advantages of the invention and sacrifices, if any, made to achieve these advantages. Describe any experiments conducted and the results of those experiments.

The invention is described in detail in Tsunami CRS Version 2.0 (Attachment 1), the entirety of which constitutes a practical embodiment of the invention. Attachments 2 & 4 contain graphical depiction of the process of N-MEM parametrization as described in Tsunami CRS Version 2.0

Attachment 2

Tsunami Style (N-MEM)



Attachment 3 Parameterized *Tsunami* Style (N-MEM)

